



Weld County, Colorado
Section 33-T01N-R65W
Walla 5-4-4L
plan1

Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 8.28° East

Walla 5-4-4L			
Surf loc: 835 FSL 300 FWL Sec33-T01N-R65W			
NAD83 Colorado - HARN			
Universal Transverse Mercator (US Survey Feet)			
Zone 13N (108 W to 102 W)			
RKB=54076+25 @ 5101.00ft			
Northing	Easting	Latitude	Longitude
14527926.11	1730772.75	40.00282608	-104.67734541

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	5434.64	43.46	246.04	5394.14	-63.81	-143.56	10.00	89.22	Begin 43.46° tangent section
4	7916.90	43.46	246.04	7195.77	-757.38	-1703.91	0.00	1058.90	Begin 10°/100' build/turn
5	8652.54	89.82	180.12	7508.00	-1305.40	-1974.03	10.00	1647.37	LP Begin 89.82° lateral section
6	17957.04	89.82	180.12	7537.00	-10609.85	-1992.81	0.00	10795.37	PBHL/TD 17957.04 MD/7537.00 TVD

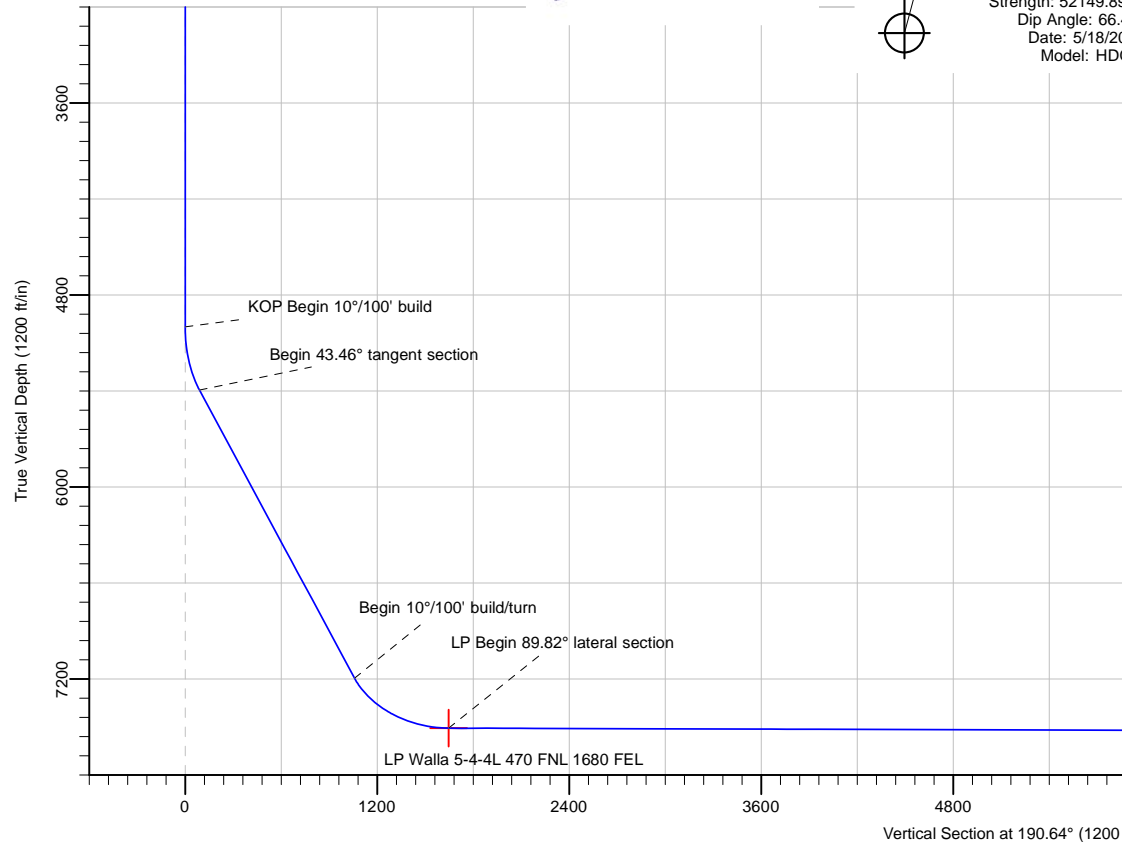
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Walla 5-4-4L 470 FNL 1680 FEL	7508.00	-1305.40	-1974.03	14526613.57	1728803.46	39.99924101	-104.68439408
BHL Walla 5-4-4L 470 FSL 1680 FEL	7537.00	-10609.85	-1992.81	14517309.14	1728818.37	39.97368943	-104.68445842



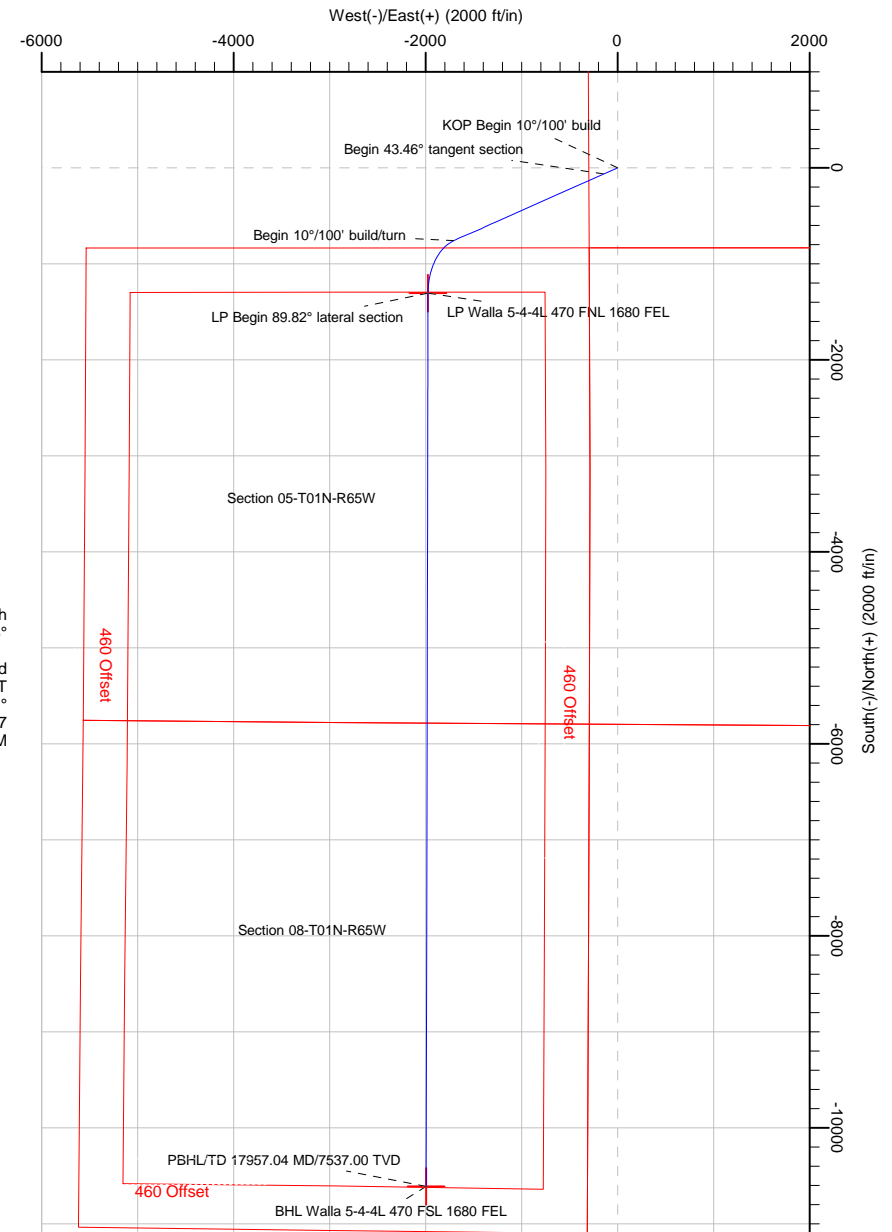
Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52149.8snT
Dip Angle: 66.45°
Date: 5/18/2017
Model: HDGM



Date: 21:08, May 18 2017

Vertical Section at 190.64° (1200 ft/in)



PBHL/TD 17957.04 MD/7537.00 TVD

BHL Walla 5-4-4L 470 FSL 1680 FEL

Note: All lease lines and hard lines are estimates only and are subject to customers approval.

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		Section 33-T01N-R65W			
Site Position:		Northing:	14,527,751.12 usft	Latitude:	40.00234552
From:	Map	Easting:	1,730,774.27 usft	Longitude:	-104.67734224
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well	Walla 5-4-4L, Surf loc: 835 FSL 300 FWL Sec33-T01N-R65W					
Well Position	+N/-S	174.99 ft	Northing:	14,527,926.11 usft	Latitude:	40.00282608
	+E/-W	-0.89 ft	Easting:	1,730,772.75 usft	Longitude:	-104.67734540
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,076.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/18/2017	8.28	66.45	52,149.80000000

Design	plan1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	190.64

Plan Survey Tool Program	Date	5/18/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,957.05	plan1 (Original Hole)	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,434.64	43.46	246.04	5,394.14	-63.81	-143.56	10.00	10.00	0.00	246.04	
7,916.90	43.46	246.04	7,195.77	-757.38	-1,703.91	0.00	0.00	0.00	0.00	
8,652.54	89.82	180.12	7,508.00	-1,305.40	-1,974.03	10.00	6.30	-8.96	-72.15	LP Walla 5-4-4L 470 F
17,957.05	89.82	180.12	7,537.00	-10,609.85	-1,992.81	0.00	0.00	0.00	0.00	BHL Walla 5-4-4L 470

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.01	0.00	0.00	2,500.01	0.00	0.00	0.00	0.00	0.00	0.00
2,600.01	0.00	0.00	2,600.01	0.00	0.00	0.00	0.00	0.00	0.00
2,700.01	0.00	0.00	2,700.01	0.00	0.00	0.00	0.00	0.00	0.00
2,800.01	0.00	0.00	2,800.01	0.00	0.00	0.00	0.00	0.00	0.00
2,900.01	0.00	0.00	2,900.01	0.00	0.00	0.00	0.00	0.00	0.00
3,000.01	0.00	0.00	3,000.01	0.00	0.00	0.00	0.00	0.00	0.00
3,100.01	0.00	0.00	3,100.01	0.00	0.00	0.00	0.00	0.00	0.00
3,200.01	0.00	0.00	3,200.01	0.00	0.00	0.00	0.00	0.00	0.00
3,300.01	0.00	0.00	3,300.01	0.00	0.00	0.00	0.00	0.00	0.00
3,400.01	0.00	0.00	3,400.01	0.00	0.00	0.00	0.00	0.00	0.00
3,500.01	0.00	0.00	3,500.01	0.00	0.00	0.00	0.00	0.00	0.00
3,600.01	0.00	0.00	3,600.01	0.00	0.00	0.00	0.00	0.00	0.00
3,700.01	0.00	0.00	3,700.01	0.00	0.00	0.00	0.00	0.00	0.00
3,800.01	0.00	0.00	3,800.01	0.00	0.00	0.00	0.00	0.00	0.00
3,900.01	0.00	0.00	3,900.01	0.00	0.00	0.00	0.00	0.00	0.00
4,000.01	0.00	0.00	4,000.01	0.00	0.00	0.00	0.00	0.00	0.00
4,100.01	0.00	0.00	4,100.01	0.00	0.00	0.00	0.00	0.00	0.00
4,200.01	0.00	0.00	4,200.01	0.00	0.00	0.00	0.00	0.00	0.00
4,300.01	0.00	0.00	4,300.01	0.00	0.00	0.00	0.00	0.00	0.00
4,400.01	0.00	0.00	4,400.01	0.00	0.00	0.00	0.00	0.00	0.00
4,500.01	0.00	0.00	4,500.01	0.00	0.00	0.00	0.00	0.00	0.00
4,600.01	0.00	0.00	4,600.01	0.00	0.00	0.00	0.00	0.00	0.00
4,700.01	0.00	0.00	4,700.01	0.00	0.00	0.00	0.00	0.00	0.00
4,800.01	0.00	0.00	4,800.01	0.00	0.00	0.00	0.00	0.00	0.00
4,900.01	0.00	0.00	4,900.01	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 10°/100' build									
5,000.01	0.00	246.04	5,000.01	0.00	0.00	0.00	0.00	0.00	0.00
5,100.01	10.00	246.04	5,099.50	-3.54	-7.96	4.94	10.00	10.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.01	20.00	246.04	5,195.97	-14.04	-31.58	19.62	10.00	10.00	0.00
5,300.01	30.00	246.04	5,286.49	-31.18	-70.15	43.59	10.00	10.00	0.00
5,400.01	40.00	246.04	5,368.30	-54.45	-122.50	76.13	10.00	10.00	0.00
5,434.64	43.46	246.04	5,394.14	-63.81	-143.56	89.22	10.00	10.00	0.00
Begin 43.46° tangent section									
5,500.01	43.46	246.04	5,441.58	-82.08	-184.65	114.75	0.00	0.00	0.00
5,600.01	43.46	246.04	5,514.16	-110.02	-247.51	153.82	0.00	0.00	0.00
5,700.01	43.46	246.04	5,586.74	-137.96	-310.37	192.88	0.00	0.00	0.00
5,800.01	43.46	246.04	5,659.33	-165.90	-373.23	231.95	0.00	0.00	0.00
5,900.01	43.46	246.04	5,731.91	-193.84	-436.09	271.01	0.00	0.00	0.00
6,000.01	43.46	246.04	5,804.49	-221.78	-498.95	310.07	0.00	0.00	0.00
6,100.01	43.46	246.04	5,877.07	-249.72	-561.81	349.14	0.00	0.00	0.00
6,200.01	43.46	246.04	5,949.65	-277.66	-624.67	388.20	0.00	0.00	0.00
6,300.01	43.46	246.04	6,022.23	-305.60	-687.53	427.27	0.00	0.00	0.00
6,400.01	43.46	246.04	6,094.81	-333.54	-750.39	466.33	0.00	0.00	0.00
6,500.01	43.46	246.04	6,167.39	-361.49	-813.25	505.40	0.00	0.00	0.00
6,600.01	43.46	246.04	6,239.97	-389.43	-876.11	544.46	0.00	0.00	0.00
6,700.01	43.46	246.04	6,312.55	-417.37	-938.97	583.53	0.00	0.00	0.00
6,800.01	43.46	246.04	6,385.13	-445.31	-1,001.83	622.59	0.00	0.00	0.00
6,900.01	43.46	246.04	6,457.71	-473.25	-1,064.69	661.66	0.00	0.00	0.00
7,000.01	43.46	246.04	6,530.29	-501.19	-1,127.55	700.72	0.00	0.00	0.00
7,100.01	43.46	246.04	6,602.87	-529.13	-1,190.41	739.79	0.00	0.00	0.00
7,200.01	43.46	246.04	6,675.45	-557.07	-1,253.27	778.85	0.00	0.00	0.00
7,300.01	43.46	246.04	6,748.03	-585.01	-1,316.13	817.92	0.00	0.00	0.00
7,400.01	43.46	246.04	6,820.61	-612.95	-1,379.00	856.98	0.00	0.00	0.00
7,500.02	43.46	246.04	6,893.19	-640.90	-1,441.86	896.05	0.00	0.00	0.00
7,600.02	43.46	246.04	6,965.77	-668.84	-1,504.72	935.11	0.00	0.00	0.00
7,700.02	43.46	246.04	7,038.35	-696.78	-1,567.58	974.17	0.00	0.00	0.00
7,800.02	43.46	246.04	7,110.94	-724.72	-1,630.44	1,013.24	0.00	0.00	0.00
7,900.02	43.46	246.04	7,183.52	-752.66	-1,693.30	1,052.30	0.00	0.00	0.00
7,916.90	43.46	246.04	7,195.77	-757.38	-1,703.91	1,058.90	0.00	0.00	0.00
Begin 10°/100' build/turn									
8,000.02	46.55	235.11	7,254.62	-786.30	-1,754.87	1,096.73	10.00	3.71	-13.14
8,100.02	51.48	223.56	7,320.31	-835.53	-1,811.75	1,155.62	10.00	4.93	-11.55
8,200.02	57.38	213.63	7,378.55	-899.11	-1,862.16	1,227.41	10.00	5.91	-9.94
8,300.02	63.97	204.99	7,427.56	-975.10	-1,904.57	1,309.92	10.00	6.59	-8.64
8,400.02	71.02	197.30	7,465.86	-1,061.18	-1,937.69	1,400.64	10.00	7.05	-7.69
8,500.02	78.35	190.25	7,492.28	-1,154.75	-1,960.52	1,496.82	10.00	7.34	-7.05
8,600.02	85.85	183.56	7,506.02	-1,252.97	-1,972.35	1,595.53	10.00	7.50	-6.68
8,652.54	89.82	180.12	7,508.00	-1,305.40	-1,974.03	1,647.37	10.00	7.56	-6.56
LP Begin 89.82° lateral section									
8,700.02	89.82	180.12	7,508.15	-1,352.88	-1,974.13	1,694.05	0.00	0.00	0.00
8,800.02	89.82	180.12	7,508.46	-1,452.88	-1,974.33	1,792.37	0.00	0.00	0.00
8,900.02	89.82	180.12	7,508.77	-1,552.88	-1,974.53	1,890.69	0.00	0.00	0.00
9,000.02	89.82	180.12	7,509.08	-1,652.88	-1,974.73	1,989.01	0.00	0.00	0.00
9,100.02	89.82	180.12	7,509.39	-1,752.88	-1,974.94	2,087.33	0.00	0.00	0.00
9,200.02	89.82	180.12	7,509.71	-1,852.88	-1,975.14	2,185.64	0.00	0.00	0.00
9,300.02	89.82	180.12	7,510.02	-1,952.88	-1,975.34	2,283.96	0.00	0.00	0.00
9,400.02	89.82	180.12	7,510.33	-2,052.88	-1,975.54	2,382.28	0.00	0.00	0.00
9,500.02	89.82	180.12	7,510.64	-2,152.88	-1,975.74	2,480.60	0.00	0.00	0.00
9,600.02	89.82	180.12	7,510.95	-2,252.88	-1,975.94	2,578.92	0.00	0.00	0.00
9,700.02	89.82	180.12	7,511.26	-2,352.88	-1,976.15	2,677.23	0.00	0.00	0.00
9,800.02	89.82	180.12	7,511.58	-2,452.88	-1,976.35	2,775.55	0.00	0.00	0.00

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Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,900.02	89.82	180.12	7,511.89	-2,552.88	-1,976.55	2,873.87	0.00	0.00	0.00
10,000.02	89.82	180.12	7,512.20	-2,652.88	-1,976.75	2,972.19	0.00	0.00	0.00
10,100.02	89.82	180.12	7,512.51	-2,752.88	-1,976.95	3,070.51	0.00	0.00	0.00
10,200.02	89.82	180.12	7,512.82	-2,852.88	-1,977.16	3,168.83	0.00	0.00	0.00
10,300.02	89.82	180.12	7,513.13	-2,952.88	-1,977.36	3,267.14	0.00	0.00	0.00
10,400.02	89.82	180.12	7,513.45	-3,052.87	-1,977.56	3,365.46	0.00	0.00	0.00
10,500.02	89.82	180.12	7,513.76	-3,152.87	-1,977.76	3,463.78	0.00	0.00	0.00
10,600.02	89.82	180.12	7,514.07	-3,252.87	-1,977.96	3,562.10	0.00	0.00	0.00
10,700.02	89.82	180.12	7,514.38	-3,352.87	-1,978.16	3,660.42	0.00	0.00	0.00
10,800.02	89.82	180.12	7,514.69	-3,452.87	-1,978.37	3,758.73	0.00	0.00	0.00
10,900.02	89.82	180.12	7,515.01	-3,552.87	-1,978.57	3,857.05	0.00	0.00	0.00
11,000.02	89.82	180.12	7,515.32	-3,652.87	-1,978.77	3,955.37	0.00	0.00	0.00
11,100.02	89.82	180.12	7,515.63	-3,752.87	-1,978.97	4,053.69	0.00	0.00	0.00
11,200.02	89.82	180.12	7,515.94	-3,852.87	-1,979.17	4,152.01	0.00	0.00	0.00
11,300.02	89.82	180.12	7,516.25	-3,952.87	-1,979.37	4,250.33	0.00	0.00	0.00
11,400.02	89.82	180.12	7,516.56	-4,052.87	-1,979.58	4,348.64	0.00	0.00	0.00
11,500.02	89.82	180.12	7,516.88	-4,152.87	-1,979.78	4,446.96	0.00	0.00	0.00
11,600.02	89.82	180.12	7,517.19	-4,252.87	-1,979.98	4,545.28	0.00	0.00	0.00
11,700.02	89.82	180.12	7,517.50	-4,352.87	-1,980.18	4,643.60	0.00	0.00	0.00
11,800.02	89.82	180.12	7,517.81	-4,452.87	-1,980.38	4,741.92	0.00	0.00	0.00
11,900.02	89.82	180.12	7,518.12	-4,552.87	-1,980.59	4,840.23	0.00	0.00	0.00
12,000.02	89.82	180.12	7,518.43	-4,652.87	-1,980.79	4,938.55	0.00	0.00	0.00
12,100.02	89.82	180.12	7,518.75	-4,752.87	-1,980.99	5,036.87	0.00	0.00	0.00
12,200.02	89.82	180.12	7,519.06	-4,852.87	-1,981.19	5,135.19	0.00	0.00	0.00
12,300.02	89.82	180.12	7,519.37	-4,952.87	-1,981.39	5,233.51	0.00	0.00	0.00
12,400.03	89.82	180.12	7,519.68	-5,052.86	-1,981.59	5,331.83	0.00	0.00	0.00
12,500.03	89.82	180.12	7,519.99	-5,152.86	-1,981.80	5,430.14	0.00	0.00	0.00
12,600.03	89.82	180.12	7,520.30	-5,252.86	-1,982.00	5,528.46	0.00	0.00	0.00
12,700.03	89.82	180.12	7,520.62	-5,352.86	-1,982.20	5,626.78	0.00	0.00	0.00
12,800.03	89.82	180.12	7,520.93	-5,452.86	-1,982.40	5,725.10	0.00	0.00	0.00
12,900.03	89.82	180.12	7,521.24	-5,552.86	-1,982.60	5,823.42	0.00	0.00	0.00
13,000.03	89.82	180.12	7,521.55	-5,652.86	-1,982.80	5,921.73	0.00	0.00	0.00
13,100.03	89.82	180.12	7,521.86	-5,752.86	-1,983.01	6,020.05	0.00	0.00	0.00
13,200.03	89.82	180.12	7,522.17	-5,852.86	-1,983.21	6,118.37	0.00	0.00	0.00
13,300.03	89.82	180.12	7,522.49	-5,952.86	-1,983.41	6,216.69	0.00	0.00	0.00
13,400.03	89.82	180.12	7,522.80	-6,052.86	-1,983.61	6,315.01	0.00	0.00	0.00
13,500.03	89.82	180.12	7,523.11	-6,152.86	-1,983.81	6,413.33	0.00	0.00	0.00
13,600.03	89.82	180.12	7,523.42	-6,252.86	-1,984.02	6,511.64	0.00	0.00	0.00
13,700.03	89.82	180.12	7,523.73	-6,352.86	-1,984.22	6,609.96	0.00	0.00	0.00
13,800.03	89.82	180.12	7,524.04	-6,452.86	-1,984.42	6,708.28	0.00	0.00	0.00
13,900.03	89.82	180.12	7,524.36	-6,552.86	-1,984.62	6,806.60	0.00	0.00	0.00
14,000.03	89.82	180.12	7,524.67	-6,652.86	-1,984.82	6,904.92	0.00	0.00	0.00
14,100.03	89.82	180.12	7,524.98	-6,752.86	-1,985.02	7,003.23	0.00	0.00	0.00
14,200.03	89.82	180.12	7,525.29	-6,852.86	-1,985.23	7,101.55	0.00	0.00	0.00
14,300.03	89.82	180.12	7,525.60	-6,952.86	-1,985.43	7,199.87	0.00	0.00	0.00
14,400.03	89.82	180.12	7,525.91	-7,052.86	-1,985.63	7,298.19	0.00	0.00	0.00
14,500.03	89.82	180.12	7,526.23	-7,152.85	-1,985.83	7,396.51	0.00	0.00	0.00
14,600.03	89.82	180.12	7,526.54	-7,252.85	-1,986.03	7,494.83	0.00	0.00	0.00
14,700.03	89.82	180.12	7,526.85	-7,352.85	-1,986.24	7,593.14	0.00	0.00	0.00
14,800.03	89.82	180.12	7,527.16	-7,452.85	-1,986.44	7,691.46	0.00	0.00	0.00
14,900.03	89.82	180.12	7,527.47	-7,552.85	-1,986.64	7,789.78	0.00	0.00	0.00
15,000.03	89.82	180.12	7,527.78	-7,652.85	-1,986.84	7,888.10	0.00	0.00	0.00
15,100.03	89.82	180.12	7,528.10	-7,752.85	-1,987.04	7,986.42	0.00	0.00	0.00
15,200.03	89.82	180.12	7,528.41	-7,852.85	-1,987.24	8,084.73	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
15,300.03	89.82	180.12	7,528.72	-7,952.85	-1,987.45	8,183.05	0.00	0.00	0.00	
15,400.03	89.82	180.12	7,529.03	-8,052.85	-1,987.65	8,281.37	0.00	0.00	0.00	
15,500.03	89.82	180.12	7,529.34	-8,152.85	-1,987.85	8,379.69	0.00	0.00	0.00	
15,600.03	89.82	180.12	7,529.65	-8,252.85	-1,988.05	8,478.01	0.00	0.00	0.00	
15,700.03	89.82	180.12	7,529.97	-8,352.85	-1,988.25	8,576.33	0.00	0.00	0.00	
15,800.03	89.82	180.12	7,530.28	-8,452.85	-1,988.45	8,674.64	0.00	0.00	0.00	
15,900.03	89.82	180.12	7,530.59	-8,552.85	-1,988.66	8,772.96	0.00	0.00	0.00	
16,000.03	89.82	180.12	7,530.90	-8,652.85	-1,988.86	8,871.28	0.00	0.00	0.00	
16,100.03	89.82	180.12	7,531.21	-8,752.85	-1,989.06	8,969.60	0.00	0.00	0.00	
16,200.03	89.82	180.12	7,531.52	-8,852.85	-1,989.26	9,067.92	0.00	0.00	0.00	
16,300.03	89.82	180.12	7,531.84	-8,952.85	-1,989.46	9,166.23	0.00	0.00	0.00	
16,400.03	89.82	180.12	7,532.15	-9,052.85	-1,989.67	9,264.55	0.00	0.00	0.00	
16,500.03	89.82	180.12	7,532.46	-9,152.84	-1,989.87	9,362.87	0.00	0.00	0.00	
16,600.03	89.82	180.12	7,532.77	-9,252.84	-1,990.07	9,461.19	0.00	0.00	0.00	
16,700.03	89.82	180.12	7,533.08	-9,352.84	-1,990.27	9,559.51	0.00	0.00	0.00	
16,800.03	89.82	180.12	7,533.39	-9,452.84	-1,990.47	9,657.83	0.00	0.00	0.00	
16,900.03	89.82	180.12	7,533.71	-9,552.84	-1,990.67	9,756.14	0.00	0.00	0.00	
17,000.03	89.82	180.12	7,534.02	-9,652.84	-1,990.88	9,854.46	0.00	0.00	0.00	
17,100.03	89.82	180.12	7,534.33	-9,752.84	-1,991.08	9,952.78	0.00	0.00	0.00	
17,200.03	89.82	180.12	7,534.64	-9,852.84	-1,991.28	10,051.10	0.00	0.00	0.00	
17,300.03	89.82	180.12	7,534.95	-9,952.84	-1,991.48	10,149.42	0.00	0.00	0.00	
17,400.04	89.82	180.12	7,535.26	-10,052.84	-1,991.68	10,247.73	0.00	0.00	0.00	
17,500.04	89.82	180.12	7,535.58	-10,152.84	-1,991.88	10,346.05	0.00	0.00	0.00	
17,600.04	89.82	180.12	7,535.89	-10,252.84	-1,992.09	10,444.37	0.00	0.00	0.00	
17,700.04	89.82	180.12	7,536.20	-10,352.84	-1,992.29	10,542.69	0.00	0.00	0.00	
17,800.04	89.82	180.12	7,536.51	-10,452.84	-1,992.49	10,641.01	0.00	0.00	0.00	
17,900.04	89.82	180.12	7,536.82	-10,552.84	-1,992.69	10,739.33	0.00	0.00	0.00	
17,957.05	89.82	180.12	7,537.00	-10,609.85	-1,992.81	10,795.38	0.00	0.00	0.00	
PBHL/TD 17957.04 MD/7537.00 TVD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LP Walla 5-4-4L 470 FNI - plan hits target center - Point	0.00	0.00	7,508.00	-1,305.40	-1,974.03	14,526,613.57	1,728,803.46	39.99924101	-104.68439408	
BHL Walla 5-4-4L 470 F: - plan hits target center - Point	0.00	0.00	7,537.00	-10,609.85	-1,992.81	14,517,309.14	1,728,818.37	39.97368943	-104.68445842	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build	
5,434.64	5,394.14	-63.81	-143.56	Begin 43.46° tangent section	
7,916.90	7,195.77	-757.38	-1,703.91	Begin 10°/100' build/turn	
8,652.54	7,508.00	-1,305.40	-1,974.03	LP Begin 89.82° lateral section	
17,957.05	7,537.00	-10,609.85	-1,992.81	PBHL/TD 17957.04 MD/7537.00 TVD	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		Section 33-T01N-R65W			
Site Position:		Northing:	14,527,751.12 usft	Latitude:	40.00234552
From:	Map	Easting:	1,730,774.27 usft	Longitude:	-104.67734224
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well	Walla 5-4-4L, Surf loc: 835 FSL 300 FWL Sec33-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,926.11 usft	Latitude:	40.00282608
	+E/-W	0.00 ft	Easting:	1,730,772.75 usft	Longitude:	-104.67734540
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,076.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/18/2017	8.28	66.45	52,149.80000000

Design	plan1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	190.64

Plan Survey Tool Program	Date	5/18/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,957.05 plan1 (Original Hole)		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,434.64	43.46	246.04	5,394.14	-63.81	-143.56	10.00	10.00	0.00	246.04	
7,916.90	43.46	246.04	7,195.77	-757.38	-1,703.91	0.00	0.00	0.00	0.00	
8,652.54	89.82	180.12	7,508.00	-1,305.40	-1,974.03	10.00	6.30	-8.96	-72.15	LP Walla 5-4-4L 470 F
17,957.05	89.82	180.12	7,537.00	-10,609.85	-1,992.81	0.00	0.00	0.00	0.00	BHL Walla 5-4-4L 470

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
100.00	0.00	0.00	100.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
200.00	0.00	0.00	200.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
300.00	0.00	0.00	300.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
400.00	0.00	0.00	400.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
500.00	0.00	0.00	500.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
600.00	0.00	0.00	600.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
700.00	0.00	0.00	700.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
800.00	0.00	0.00	800.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
900.00	0.00	0.00	900.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,500.01	0.00	0.00	2,500.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,600.01	0.00	0.00	2,600.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,700.01	0.00	0.00	2,700.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,800.01	0.00	0.00	2,800.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
2,900.01	0.00	0.00	2,900.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,000.01	0.00	0.00	3,000.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,100.01	0.00	0.00	3,100.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,200.01	0.00	0.00	3,200.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,300.01	0.00	0.00	3,300.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,400.01	0.00	0.00	3,400.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,500.01	0.00	0.00	3,500.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,600.01	0.00	0.00	3,600.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,700.01	0.00	0.00	3,700.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,800.01	0.00	0.00	3,800.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
3,900.01	0.00	0.00	3,900.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,000.01	0.00	0.00	4,000.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,100.01	0.00	0.00	4,100.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,200.01	0.00	0.00	4,200.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,300.01	0.00	0.00	4,300.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,400.01	0.00	0.00	4,400.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,500.01	0.00	0.00	4,500.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,600.01	0.00	0.00	4,600.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,700.01	0.00	0.00	4,700.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,800.01	0.00	0.00	4,800.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
4,900.01	0.00	0.00	4,900.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
KOP Begin 10°/100' build									
5,000.01	0.00	246.04	5,000.01	0.00	0.00	14,527,926.11	1,730,772.75	40.00282608	-104.67734540
5,100.01	10.00	246.04	5,099.50	-3.54	-7.96	14,527,922.55	1,730,764.81	40.00281637	-104.67737381

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.01	20.00	246.04	5,195.97	-14.04	-31.58	14,527,911.96	1,730,741.22	40.00278754	-104.67745816
5,300.01	30.00	246.04	5,286.49	-31.18	-70.15	14,527,894.68	1,730,702.71	40.00274045	-104.67759590
5,400.01	40.00	246.04	5,368.30	-54.45	-122.50	14,527,871.22	1,730,650.45	40.00267655	-104.67778283
5,434.64	43.46	246.04	5,394.14	-63.81	-143.56	14,527,861.78	1,730,629.42	40.00265084	-104.67785804
Begin 43.46° tangent section									
5,500.01	43.46	246.04	5,441.58	-82.08	-184.65	14,527,843.37	1,730,588.40	40.00260069	-104.67800476
5,600.01	43.46	246.04	5,514.16	-110.02	-247.51	14,527,815.20	1,730,525.64	40.00252396	-104.67822923
5,700.01	43.46	246.04	5,586.74	-137.96	-310.37	14,527,787.03	1,730,462.88	40.00244722	-104.67845369
5,800.01	43.46	246.04	5,659.33	-165.90	-373.23	14,527,758.87	1,730,400.12	40.00237049	-104.67867816
5,900.01	43.46	246.04	5,731.91	-193.84	-436.09	14,527,730.70	1,730,337.36	40.00229376	-104.67890262
6,000.01	43.46	246.04	5,804.49	-221.78	-498.95	14,527,702.53	1,730,274.60	40.00221702	-104.67912708
6,100.01	43.46	246.04	5,877.07	-249.72	-561.81	14,527,674.36	1,730,211.85	40.00214029	-104.67935155
6,200.01	43.46	246.04	5,949.65	-277.66	-624.67	14,527,646.19	1,730,149.09	40.00206355	-104.67957601
6,300.01	43.46	246.04	6,022.23	-305.60	-687.53	14,527,618.02	1,730,086.33	40.00198682	-104.67980047
6,400.01	43.46	246.04	6,094.81	-333.54	-750.39	14,527,589.86	1,730,023.57	40.00191008	-104.68002493
6,500.01	43.46	246.04	6,167.39	-361.49	-813.25	14,527,561.69	1,729,960.81	40.00183335	-104.68024939
6,600.01	43.46	246.04	6,239.97	-389.43	-876.11	14,527,533.52	1,729,898.05	40.00175661	-104.68047385
6,700.01	43.46	246.04	6,312.55	-417.37	-938.97	14,527,505.35	1,729,835.29	40.00167987	-104.68069831
6,800.01	43.46	246.04	6,385.13	-445.31	-1,001.83	14,527,477.18	1,729,772.54	40.00160314	-104.68092277
6,900.01	43.46	246.04	6,457.71	-473.25	-1,064.69	14,527,449.01	1,729,709.78	40.00152640	-104.68114723
7,000.01	43.46	246.04	6,530.29	-501.19	-1,127.55	14,527,420.85	1,729,647.02	40.00144966	-104.68137169
7,100.01	43.46	246.04	6,602.87	-529.13	-1,190.41	14,527,392.68	1,729,584.26	40.00137292	-104.68159615
7,200.01	43.46	246.04	6,675.45	-557.07	-1,253.27	14,527,364.51	1,729,521.50	40.00129618	-104.68182060
7,300.01	43.46	246.04	6,748.03	-585.01	-1,316.13	14,527,336.34	1,729,458.74	40.00121944	-104.68204506
7,400.01	43.46	246.04	6,820.61	-612.95	-1,379.00	14,527,308.17	1,729,395.98	40.00114270	-104.68226952
7,500.02	43.46	246.04	6,893.19	-640.90	-1,441.86	14,527,280.00	1,729,333.23	40.00106596	-104.68249397
7,600.02	43.46	246.04	6,965.77	-668.84	-1,504.72	14,527,251.84	1,729,270.47	40.00098922	-104.68271843
7,700.02	43.46	246.04	7,038.35	-696.78	-1,567.58	14,527,223.67	1,729,207.71	40.00091248	-104.68294288
7,800.02	43.46	246.04	7,110.94	-724.72	-1,630.44	14,527,195.50	1,729,144.95	40.00083574	-104.68316733
7,900.02	43.46	246.04	7,183.52	-752.66	-1,693.30	14,527,167.33	1,729,082.19	40.00075900	-104.68339179
7,916.90	43.46	246.04	7,195.77	-757.38	-1,703.91	14,527,162.58	1,729,071.60	40.00074604	-104.68342968
Begin 10°/100' build/turn									
8,000.02	46.55	235.11	7,254.62	-786.30	-1,754.87	14,527,133.47	1,729,020.74	40.00066661	-104.68361165
8,100.02	51.48	223.56	7,320.31	-835.53	-1,811.75	14,527,084.03	1,728,964.04	40.00053139	-104.68381473
8,200.02	57.38	213.63	7,378.55	-899.11	-1,862.16	14,527,020.27	1,728,913.86	40.00035679	-104.68399472
8,300.02	63.97	204.99	7,427.56	-975.10	-1,904.57	14,526,944.13	1,728,871.73	40.00014811	-104.68414613
8,400.02	71.02	197.30	7,465.86	-1,061.18	-1,937.69	14,526,857.93	1,728,838.92	39.99991170	-104.68426437
8,500.02	78.35	190.25	7,492.28	-1,154.75	-1,960.52	14,526,764.27	1,728,816.43	39.99965473	-104.68434585
8,600.02	85.85	183.56	7,506.02	-1,252.97	-1,972.35	14,526,666.02	1,728,804.95	39.99938502	-104.68438810
8,652.54	89.82	180.12	7,508.00	-1,305.40	-1,974.03	14,526,613.57	1,728,803.46	39.99924101	-104.68439408
LP Begin 89.82° lateral section									
8,700.02	89.82	180.12	7,508.15	-1,352.88	-1,974.13	14,526,566.10	1,728,803.53	39.99911063	-104.68439441
8,800.02	89.82	180.12	7,508.46	-1,452.88	-1,974.33	14,526,466.10	1,728,803.69	39.99883601	-104.68439510
8,900.02	89.82	180.12	7,508.77	-1,552.88	-1,974.53	14,526,366.10	1,728,803.86	39.99856140	-104.68439579
9,000.02	89.82	180.12	7,509.08	-1,652.88	-1,974.73	14,526,266.10	1,728,804.02	39.99828678	-104.68439648
9,100.02	89.82	180.12	7,509.39	-1,752.88	-1,974.94	14,526,166.10	1,728,804.18	39.99801217	-104.68439718
9,200.02	89.82	180.12	7,509.71	-1,852.88	-1,975.14	14,526,066.10	1,728,804.34	39.99773755	-104.68439787
9,300.02	89.82	180.12	7,510.02	-1,952.88	-1,975.34	14,525,966.10	1,728,804.50	39.99746294	-104.68439856
9,400.02	89.82	180.12	7,510.33	-2,052.88	-1,975.54	14,525,866.10	1,728,804.66	39.99718832	-104.68439925
9,500.02	89.82	180.12	7,510.64	-2,152.88	-1,975.74	14,525,766.10	1,728,804.82	39.99691371	-104.68439994
9,600.02	89.82	180.12	7,510.95	-2,252.88	-1,975.94	14,525,666.10	1,728,804.98	39.99663909	-104.68440064
9,700.02	89.82	180.12	7,511.26	-2,352.88	-1,976.15	14,525,566.10	1,728,805.14	39.99636448	-104.68440133
9,800.02	89.82	180.12	7,511.58	-2,452.88	-1,976.35	14,525,466.10	1,728,805.30	39.99608986	-104.68440202
9,900.02	89.82	180.12	7,511.89	-2,552.88	-1,976.55	14,525,366.10	1,728,805.46	39.99581525	-104.68440271

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,000.02	89.82	180.12	7,512.20	-2,652.88	-1,976.75	14,525,266.10	1,728,805.62	39.99554063	-104.68440340
10,100.02	89.82	180.12	7,512.51	-2,752.88	-1,976.95	14,525,166.11	1,728,805.78	39.99526602	-104.68440409
10,200.02	89.82	180.12	7,512.82	-2,852.88	-1,977.16	14,525,066.11	1,728,805.94	39.99499140	-104.68440479
10,300.02	89.82	180.12	7,513.13	-2,952.88	-1,977.36	14,524,966.11	1,728,806.10	39.99471679	-104.68440548
10,400.02	89.82	180.12	7,513.45	-3,052.87	-1,977.56	14,524,866.11	1,728,806.26	39.99444217	-104.68440617
10,500.02	89.82	180.12	7,513.76	-3,152.87	-1,977.76	14,524,766.11	1,728,806.42	39.99416756	-104.68440686
10,600.02	89.82	180.12	7,514.07	-3,252.87	-1,977.96	14,524,666.11	1,728,806.58	39.99389294	-104.68440755
10,700.02	89.82	180.12	7,514.38	-3,352.87	-1,978.16	14,524,566.11	1,728,806.74	39.99361833	-104.68440825
10,800.02	89.82	180.12	7,514.69	-3,452.87	-1,978.37	14,524,466.11	1,728,806.90	39.99334371	-104.68440894
10,900.02	89.82	180.12	7,515.01	-3,552.87	-1,978.57	14,524,366.11	1,728,807.06	39.99306909	-104.68440963
11,000.02	89.82	180.12	7,515.32	-3,652.87	-1,978.77	14,524,266.11	1,728,807.22	39.99279448	-104.68441032
11,100.02	89.82	180.12	7,515.63	-3,752.87	-1,978.97	14,524,166.11	1,728,807.38	39.99251986	-104.68441101
11,200.02	89.82	180.12	7,515.94	-3,852.87	-1,979.17	14,524,066.11	1,728,807.54	39.99224525	-104.68441170
11,300.02	89.82	180.12	7,516.25	-3,952.87	-1,979.37	14,523,966.11	1,728,807.70	39.99197063	-104.68441240
11,400.02	89.82	180.12	7,516.56	-4,052.87	-1,979.58	14,523,866.11	1,728,807.86	39.99169602	-104.68441309
11,500.02	89.82	180.12	7,516.88	-4,152.87	-1,979.78	14,523,766.11	1,728,808.02	39.99142140	-104.68441378
11,600.02	89.82	180.12	7,517.19	-4,252.87	-1,979.98	14,523,666.11	1,728,808.18	39.99114679	-104.68441447
11,700.02	89.82	180.12	7,517.50	-4,352.87	-1,980.18	14,523,566.11	1,728,808.34	39.99087217	-104.68441516
11,800.02	89.82	180.12	7,517.81	-4,452.87	-1,980.38	14,523,466.12	1,728,808.50	39.99059756	-104.68441586
11,900.02	89.82	180.12	7,518.12	-4,552.87	-1,980.59	14,523,366.12	1,728,808.66	39.99032294	-104.68441655
12,000.02	89.82	180.12	7,518.43	-4,652.87	-1,980.79	14,523,266.12	1,728,808.82	39.99004833	-104.68441724
12,100.02	89.82	180.12	7,518.75	-4,752.87	-1,980.99	14,523,166.12	1,728,808.98	39.98977371	-104.68441793
12,200.02	89.82	180.12	7,519.06	-4,852.87	-1,981.19	14,523,066.12	1,728,809.14	39.98949909	-104.68441862
12,300.02	89.82	180.12	7,519.37	-4,952.87	-1,981.39	14,522,966.12	1,728,809.30	39.98922448	-104.68441931
12,400.03	89.82	180.12	7,519.68	-5,052.86	-1,981.59	14,522,866.12	1,728,809.46	39.98894986	-104.68442000
12,500.03	89.82	180.12	7,519.99	-5,152.86	-1,981.80	14,522,766.12	1,728,809.62	39.98867525	-104.68442070
12,600.03	89.82	180.12	7,520.30	-5,252.86	-1,982.00	14,522,666.12	1,728,809.78	39.98840063	-104.68442139
12,700.03	89.82	180.12	7,520.62	-5,352.86	-1,982.20	14,522,566.12	1,728,809.94	39.98812602	-104.68442208
12,800.03	89.82	180.12	7,520.93	-5,452.86	-1,982.40	14,522,466.12	1,728,810.10	39.98785140	-104.68442277
12,900.03	89.82	180.12	7,521.24	-5,552.86	-1,982.60	14,522,366.12	1,728,810.27	39.98757678	-104.68442346
13,000.03	89.82	180.12	7,521.55	-5,652.86	-1,982.80	14,522,266.12	1,728,810.43	39.98730217	-104.68442415
13,100.03	89.82	180.12	7,521.86	-5,752.86	-1,983.01	14,522,166.12	1,728,810.59	39.98702755	-104.68442485
13,200.03	89.82	180.12	7,522.17	-5,852.86	-1,983.21	14,522,066.12	1,728,810.75	39.98675294	-104.68442554
13,300.03	89.82	180.12	7,522.49	-5,952.86	-1,983.41	14,521,966.12	1,728,810.91	39.98647832	-104.68442623
13,400.03	89.82	180.12	7,522.80	-6,052.86	-1,983.61	14,521,866.13	1,728,811.07	39.98620371	-104.68442692
13,500.03	89.82	180.12	7,523.11	-6,152.86	-1,983.81	14,521,766.13	1,728,811.23	39.98592909	-104.68442761
13,600.03	89.82	180.12	7,523.42	-6,252.86	-1,984.02	14,521,666.13	1,728,811.39	39.98565448	-104.68442830
13,700.03	89.82	180.12	7,523.73	-6,352.86	-1,984.22	14,521,566.13	1,728,811.55	39.98537986	-104.68442899
13,800.03	89.82	180.12	7,524.04	-6,452.86	-1,984.42	14,521,466.13	1,728,811.71	39.98510524	-104.68442969
13,900.03	89.82	180.12	7,524.36	-6,552.86	-1,984.62	14,521,366.13	1,728,811.87	39.98483063	-104.68443038
14,000.03	89.82	180.12	7,524.67	-6,652.86	-1,984.82	14,521,266.13	1,728,812.03	39.98455601	-104.68443107
14,100.03	89.82	180.12	7,524.98	-6,752.86	-1,985.02	14,521,166.13	1,728,812.19	39.98428140	-104.68443176
14,200.03	89.82	180.12	7,525.29	-6,852.86	-1,985.23	14,521,066.13	1,728,812.35	39.98400678	-104.68443245
14,300.03	89.82	180.12	7,525.60	-6,952.86	-1,985.43	14,520,966.13	1,728,812.51	39.98373216	-104.68443314
14,400.03	89.82	180.12	7,525.91	-7,052.86	-1,985.63	14,520,866.13	1,728,812.67	39.98345755	-104.68443383
14,500.03	89.82	180.12	7,526.23	-7,152.85	-1,985.83	14,520,766.13	1,728,812.83	39.98318293	-104.68443453
14,600.03	89.82	180.12	7,526.54	-7,252.85	-1,986.03	14,520,666.13	1,728,812.99	39.98290832	-104.68443522
14,700.03	89.82	180.12	7,526.85	-7,352.85	-1,986.24	14,520,566.13	1,728,813.15	39.98263370	-104.68443591
14,800.03	89.82	180.12	7,527.16	-7,452.85	-1,986.44	14,520,466.13	1,728,813.31	39.98235909	-104.68443660
14,900.03	89.82	180.12	7,527.47	-7,552.85	-1,986.64	14,520,366.13	1,728,813.47	39.98208447	-104.68443729
15,000.03	89.82	180.12	7,527.78	-7,652.85	-1,986.84	14,520,266.14	1,728,813.63	39.98180985	-104.68443798
15,100.03	89.82	180.12	7,528.10	-7,752.85	-1,987.04	14,520,166.14	1,728,813.79	39.98153524	-104.68443867
15,200.03	89.82	180.12	7,528.41	-7,852.85	-1,987.24	14,520,066.14	1,728,813.95	39.98126062	-104.68443936
15,300.03	89.82	180.12	7,528.72	-7,952.85	-1,987.45	14,519,966.14	1,728,814.11	39.98098601	-104.68444006
15,400.03	89.82	180.12	7,529.03	-8,052.85	-1,987.65	14,519,866.14	1,728,814.27	39.98071139	-104.68444075

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-4-4L
Company:	Confluence Resources	TVD Reference:	RKB=54076+25 @ 5101.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=54076+25 @ 5101.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-4-4L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,500.03	89.82	180.12	7,529.34	-8,152.85	-1,987.85	14,519,766.14	1,728,814.43	39.98043677	-104.68444144	
15,600.03	89.82	180.12	7,529.65	-8,252.85	-1,988.05	14,519,666.14	1,728,814.59	39.98016216	-104.68444213	
15,700.03	89.82	180.12	7,529.97	-8,352.85	-1,988.25	14,519,566.14	1,728,814.75	39.97988754	-104.68444282	
15,800.03	89.82	180.12	7,530.28	-8,452.85	-1,988.45	14,519,466.14	1,728,814.91	39.97961293	-104.68444351	
15,900.03	89.82	180.12	7,530.59	-8,552.85	-1,988.66	14,519,366.14	1,728,815.07	39.97933831	-104.68444420	
16,000.03	89.82	180.12	7,530.90	-8,652.85	-1,988.86	14,519,266.14	1,728,815.23	39.97906369	-104.68444489	
16,100.03	89.82	180.12	7,531.21	-8,752.85	-1,989.06	14,519,166.14	1,728,815.39	39.97878908	-104.68444559	
16,200.03	89.82	180.12	7,531.52	-8,852.85	-1,989.26	14,519,066.14	1,728,815.55	39.97851446	-104.68444628	
16,300.03	89.82	180.12	7,531.84	-8,952.85	-1,989.46	14,518,966.14	1,728,815.71	39.97823985	-104.68444697	
16,400.03	89.82	180.12	7,532.15	-9,052.85	-1,989.67	14,518,866.14	1,728,815.87	39.97796523	-104.68444766	
16,500.03	89.82	180.12	7,532.46	-9,152.84	-1,989.87	14,518,766.14	1,728,816.03	39.97769061	-104.68444835	
16,600.03	89.82	180.12	7,532.77	-9,252.84	-1,990.07	14,518,666.14	1,728,816.19	39.97741600	-104.68444904	
16,700.03	89.82	180.12	7,533.08	-9,352.84	-1,990.27	14,518,566.15	1,728,816.35	39.97714138	-104.68444973	
16,800.03	89.82	180.12	7,533.39	-9,452.84	-1,990.47	14,518,466.15	1,728,816.51	39.97686677	-104.68445042	
16,900.03	89.82	180.12	7,533.71	-9,552.84	-1,990.67	14,518,366.15	1,728,816.67	39.97659215	-104.68445111	
17,000.03	89.82	180.12	7,534.02	-9,652.84	-1,990.88	14,518,266.15	1,728,816.84	39.97631753	-104.68445180	
17,100.03	89.82	180.12	7,534.33	-9,752.84	-1,991.08	14,518,166.15	1,728,817.00	39.97604292	-104.68445250	
17,200.03	89.82	180.12	7,534.64	-9,852.84	-1,991.28	14,518,066.15	1,728,817.16	39.97576830	-104.68445319	
17,300.03	89.82	180.12	7,534.95	-9,952.84	-1,991.48	14,517,966.15	1,728,817.32	39.97549368	-104.68445388	
17,400.04	89.82	180.12	7,535.26	-10,052.84	-1,991.68	14,517,866.15	1,728,817.48	39.97521907	-104.68445457	
17,500.04	89.82	180.12	7,535.58	-10,152.84	-1,991.88	14,517,766.15	1,728,817.64	39.97494445	-104.68445526	
17,600.04	89.82	180.12	7,535.89	-10,252.84	-1,992.09	14,517,666.15	1,728,817.80	39.97466984	-104.68445595	
17,700.04	89.82	180.12	7,536.20	-10,352.84	-1,992.29	14,517,566.15	1,728,817.96	39.97439522	-104.68445664	
17,800.04	89.82	180.12	7,536.51	-10,452.84	-1,992.49	14,517,466.15	1,728,818.12	39.97412060	-104.68445733	
17,900.04	89.82	180.12	7,536.82	-10,552.84	-1,992.69	14,517,366.15	1,728,818.28	39.97384599	-104.68445802	
17,957.05	89.82	180.12	7,537.00	-10,609.85	-1,992.81	14,517,309.14	1,728,818.37	39.97368943	-104.68445842	
PBHL/TD 17957.04 MD/7537.00 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
LP Walla 5-4-4L 470 FNI - plan hits target center - Point	0.00	0.00	7,508.00	-1,305.40	-1,974.03	14,526,613.57	1,728,803.46	39.99924101	-104.68439408	
BHL Walla 5-4-4L 470 F: - plan hits target center - Point	0.00	0.00	7,537.00	-10,609.85	-1,992.81	14,517,309.14	1,728,818.37	39.97368943	-104.68445842	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build	
5,434.64	5,394.14	-63.81	-143.56	Begin 43.46° tangent section	
7,916.90	7,195.77	-757.38	-1,703.91	Begin 10°/100' build/turn	
8,652.54	7,508.00	-1,305.40	-1,974.03	LP Begin 89.82° lateral section	
17,957.05	7,537.00	-10,609.85	-1,992.81	PBHL/TD 17957.04 MD/7537.00 TVD	